Amendments to the Claims:

This listing will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (original) A green emitting Mn and alkali metal activated lanthanum aluminate phosphor having the empirical formula:

$$La_{2-x-y}B_{22}O_{36}: Mn_x A_y$$
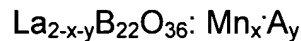
wherein: A = Li, Na or K; B = Al or Al+Ga; and $0.01 \leq x \leq 0.1$ and $0.01 \leq y \leq 0.1$.

2. (currently amended) The green emitting Mn and alkali metal activated lanthanum aluminate phosphor of claim 1, prepared by a method comprising the steps of:

~~mixing an alkali metal salt as a source of alkali metal, manganese salt as a source of manganese, lanthanum salt as a source of lanthanum and a alumina as source of aluminum;~~

reacting a dilute solution comprising a source of alkali ~~halides~~, a source of lanthanum, a source of manganese and ~~an organic precursor providing~~ a source of aluminum, in an acid medium to form a gel;

converting said gel into a gel powder by removing excess water; and

thermally decomposing the powder at specified temperatures to produce said phosphor.

3. (currently amended) The phosphor of claim 2, wherein said source of lanthanum is selected form the group consisting of: lanthanum oxalate, lanthanum nitrate, lanthanum oxide, and mixtures thereof; said source of alkali ~~halide metal~~ is selected from the group consisting of: alkali halide, alkali nitrate, alkali carbonate, alkali hydroxide, and mixtures thereof; said source of aluminum is selected form the group consisting of: aluminum oxide, aluminum isopropoxide, aluminum s-butoxide, an organic source providing aluminum, and mixtures thereof.

4. (original) The phosphor of claim 2, wherein said gel is thermally decomposed in an open atmosphere at a temperature from abut 1000°C to about 1400°C and then at a temperature from about 1000°C to about 1300°C in forming gas.

5. (original) The phosphor of claim 2, wherein said gel is dried to form said gel powder prior to thermal decomposition.

6. (original) phosphor of claim 2, wherein said gel is vacuum dried to form said gel powder as an aerogel prior to thermal decomposition.

7. (original) The phosphor of claim 2, wherein said gel is spray dried to form said gel powder prior to thermal decomposition.

8. (original) The phosphor of claim 1, wherein said phosphor has a particle size from about 0.01 microns to about 10.0 microns.

9. (original) The phosphor of claim 1, wherein said phosphor exhibits a relative intensity (AU) at 147 nm excitation from about 90 to about 100 and relative intensity

(AU) at 173 nm excitation from about 90 to about 105 with half width from about 23 to about 25 nm.

10. (original) The phosphor of claim 1, wherein said phosphor exhibits a persistence from about 7 ms to about 10 ms.

11. (original) The phosphor of claim 1, wherein said phosphor exhibits color coordinates of x from about 0.116 to about 0.136 and y from about 0.752 to about 0.782.

12. (currently amended) A method of producing a green emitting Mn and alkali metal activated lanthanum aluminate phosphor having the empirical formula:

$$La_{2-x-y}B_{22}O_{36}: Mn_x A_y$$
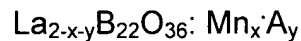
wherein: A = Li, Na or K; B = Al or Al+Ga; and $0.01 \leq x \leq 0.1$ and $0.01 \leq y \leq 0.1$; and wherein said method comprises the steps of:

~~mixing alkali metal salt as a source of alkali, manganese salt as a source of manganese, lanthanum salt as a source of lanthanum and alumina as source of aluminum;~~

reacting a dilute solution comprising a source of alkali ~~halides~~, a source of lanthanum, a source of manganese and ~~an organic precursor providing~~ a source of aluminum, in an acid medium to form a gel;

converting said gel into a gel powder by removing water; and

thermally decomposing the powder at specified temperatures to produce said phosphor.

13. (currently amended) The method of claim 12, wherein said source of lanthanum is selected form the group consisting of: lanthanum oxalate, lanthanum nitrate, lanthanum oxide, and mixtures thereof; said <u>source of</u> alkali ~~halide metal~~ is selected from the group consisting of: alkali halide, alkali nitrate, alkali carbonate, alkali hydroxide, and mixtures thereof; said source of aluminum is selected form the group consisting of: aluminum oxide, aluminum isopropoxide, aluminum s-butoxide, <u>an organic source providing aluminum,</u> and mixtures thereof.

14. (original) The method of claim 12, wherein said gel is thermally decomposed in an open atmosphere at a temperature from abut 1000°C to about 1400°C and then at a temperature from about 1000°C to about 1300°C in forming gas.

15. (original) The method of claim 12, wherein said gel is dried to form said gel powder prior to thermal decomposition.

16. (original) The method of claim 12, wherein said gel is vacuum dried to form said gel powder as an aerogel prior to thermal decomposition.

17. (original) The method of claim 12, wherein said gel is spray dried to form said gel powder prior to thermal decomposition.

18. (original) The method of claim 12, wherein said phosphor has a particle size from about 0.01 microns to about 10.0 microns.

19. (original) The method of claim 12, wherein said phosphor exhibits a relative intensity (AU) at 147 nm excitation from about 90 to about 100 and relative intensity

(AU) at 173 nm excitation from about 90 to about 105 with half width from about 23 to about 25 nm.

20. (original) The method of claim 12, wherein said phosphor exhibits a persistence from about 7 ms to about 10 ms.

21. (original) The method of claim 12, wherein said phosphor exhibits color coordinates of x from about 0.116 to about 0.136 and y from about 0.752 to about 0.782.

22. (currently amended) The method of claim 12, wherein said source of lanthanum is lanthanum oxalate, source of alkali halide is selected from the group consisting of: alkali halide, alkali nitrate; said source of manganese is selected from the group consisting of: manganese nitrate and said source of aluminum is aluminum oxide.

23. (currently amended) The method of claim 12, wherein said source of lanthanum is lanthanum oxalate; said source of manganese halide is manganese fluoride; said source of alkali halide is alkali fluoride; and said source of aluminum is aluminum oxide.

24. (original) The method of claim 12, wherein said powder is thermally decomposed in an open atmosphere at 1300^0C and then at a temperature equal 1200^0C in a forming gas contains 4.0 to 5.0 % of H_2 and remaining N_2.

25. (original) The method of claim 12, wherein said gel is dried to form a xerogel and said xero-gel is crushed to form a powder prior to thermal decomposition.

26. (original) The method of claim 12, wherein said gel is vacuum dried to form aero-gel and said aero-gel is crushed to form a powder prior to thermal decomposition.

27. (original) The method of claim 12, wherein said gel is spray dried to form gel powder and said gel powder is crushed to form a powder prior to thermal decomposition.

28. (currently amended) The method of claim 12, wherein said gel is sprayed ultrasonically and dried to form gel powder and said gel powder is crushed to form a powder prior to thermal decomposition decomposition.

29. (original) The method of claim 12, wherein said phosphor has a particle size in the range of 0.01 to 10.0 microns.

30. (original) The method of claim 25, wherein said powder has a particle size in the range of 0.05 to 5.0 microns.

31. (original) The method of claim 26, wherein said powder has a particle size in the range of 0.05 to 5.0 microns.

32. (original) The method of claim 27, wherein said powder has a particle size in the range of 0.01 to 3.0 microns.

33. (original) The method of claim 28, wherein said powder has a particle size in the range of 0.01 to 0.02 microns.

34. (currently amended) The method of claim 12, where said phosphor comprises from about 1.8 mole to about 1.98 mole of lanthanum, from about 0.01 mole to about 0.1 mole of manganese, and about 0.01 mole to about 0.1 mole of alkali-halide and 22.0 mole of aluminum.

35. (original) A phosphor material for a plasma display panel comprising a composition represented by the formula:
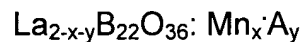
$$La_{2-x-y}B_{22}O_{36}: Mn_x A_y$$

wherein: A = Li, Na or K; B = Al or Al+Ga; and $0.01 \leq x \leq 0.1$ and $0.01 \leq y \leq 0.1$, which phosphor emits green light when excited by vacuum ultra violet light of wavelength in the range of 100nm to 200nm.

36. (original) An improved plasma display panel (PDP), having a front plate with electrodes, dielectric layer, a thin protecting layer (MgO), a back plate with electrodes, reflective layer, ribs, phosphors, and a plurality of discharge spaces formed between the front and back plates having phosphor layers, wherein the improvement comprises:

a plasma display panel which includes a green emitting phosphor material comprising a composition represented by the formula:
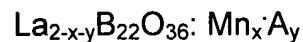
$$La_{2-x-y}B_{22}O_{36}: Mn_x A_y$$

wherein: A = Li, Na or K; B = Al or Al+Ga; and $0.01 \leq x \leq 0.1$ and $0.01 \leq y \leq 0.1$, which phosphor emits green light when excited by vacuum ultra violet light of wavelength in the range of 100nm to 200nm.
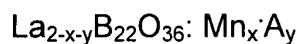
37. (original) The phosphor of claim 1, having the empirical formula:

$$La_{2-x-y} Al_{22}O_{36}:Mn_x A_y$$
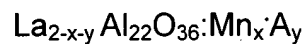
wherein: A = Li, Na, K and $0.01 \leq x \leq 0.1$ and $0.01 \leq y \leq 0.1$.

38. (original) The phosphor of claim 1, having the empirical formula:

$$La_{2-x-y}B_{22}O_{36}: Mn_x A_y$$

wherein: A = Li, Na or K; B = Al+Ga; and $0.01 \leq x \leq 0.1$ and $0.01 \leq y \leq 0.1$.